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PATENT APPLICATION
09/719,591

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Patent & Trademark Office
JUL 12 2002 JCS
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Patent & Trademark Office
Date application of:

Mohammed N. Islam et al.

JUL 17 2002

Serial No.:

09/719,591

Technology Center 2600

Filing Date:

June 16, 1999

Title: FIBER-OPTIC COMPENSATION FOR DISPERSION, GAIN
TILT, AND BAND PUMP NONLINEARITY

Assistant Commissioner
for Patents
Washington, DC 20231

Dear Examiner:

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Date of Deposit July 12, 2002

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being deposited with the United States
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for Patents, Washington, D.C. 20231.

Willie Jiles
Willie Jiles

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Applicants respectfully request, pursuant to 37 C.F.R. §§ 1.56, 1.97 and 1.98, that the references listed on the attached PTO-1449 form be considered and cited in the examination of the above-identified patent application. Copies of the references are enclosed for the convenience of the Examiner. No representation is made that a search has been made, that the references are material to the patentability of the present application, or that the references qualify as prior art.

Applicants believe that this Supplemental Information Disclosure Statement has been filed before the mailing date of the first Office Action in this case. Pursuant to 37 C.F.R. § 1.97(b), Applicants believe that no fee is due. The Commissioner is hereby authorized to charge any fees or credit any overpayments to Deposit Account No. 02-0384 of Baker Botts

L.L.P.

Respectfully submitted,

Baker Botts L.L.P.
Attorneys for Applicants

Douglas M. Kubehl

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Reg. No. 41,915

Date: July 12, 2002

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PTO-1449 Information Disclosure Citation In an Application		Application No. 10/007,643	Applicant(s) Mohammed N. Islam	
		Docket Number 069204.0175	Group Art Unit	Filing Date November 6, 2001

JUL 12 2002

U.S. PATENT DOCUMENTS

	DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
A	4,616,898	10/14/1986	Hicks, Jr.	350	96.15	09/28/1983
B	4,699,452	10/13/1987	Mollenauer et al.	350	96.16	10/28/1985
C	4,932,739	06/12/1990	Islam	350	96.15	09/25/1989
D	4,995,690	02/26/1991	Islam	350	96.15	04/24/1989
E	5,020,050	05/28/1991	Islam	370	4	10/13/1989
F	5,078,464	01/07/1992	Islam	385	122	11/07/1990
G	5,101,456	03/31/1992	Islam	385	27	11/07/1990
H	5,115,488	05/19/1992	Islam et al.	385	129	05/10/1991
I	5,224,194	06/29/1993	Islam	385	122	04/02/1991
J	5,369,519	11/29/1994	Islam	359	173	02/05/1993
K	5,485,536	01/16/1996	Islam	385	31	10/13/1994
L	5,559,920	09/24/1996	Chraplyvy et al.	385	123	03/01/1995
M	5,623,508	04/22/1997	Grubb et al.	372		JUL 17 2002 02/12/1996
N	5,629,795	05/13/1997	Suzuki et al.	359		Technology Center 2600 01/1995
O	5,664,036	09/02/1997	Islam	385	31	10/12/1995
P	5,673,280	09/30/1997	Grubb et al.	372	3	02/12/1996
Q	5,778,014	07/07/1998	Islam	372	6	12/23/1996

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T	99/66607 A2	23.12.1999	WO	H01S		X	
U	00/49721 A2	24.08.2000	WO	H04B		X	
V	1 054 489 A2	22.11.2000	EP	H01S	3/067	X	

DOCUMENT (Including Author, Title, Source, and Pertinent Pages)			DATE
W	Hansen et al., "Repeaterless transmission experiment employing dispersion," 21st European Conference on Optical Communication, Vol. 2, 1 page		09/17-21/1995
X	Nissov et al., "100 Gb/s (10x10Gb/s) WDM Transmission Over 7200 km Using Distributed Raman Amplification," European Conference on Optical Communications, paper PD-9, pp. 9-12		09/1997
Y	Hansen et al.; "Loss compensation in dispersion compensating fiber modules by Raman amplification," Optical Fiber Conference OFC'98, paper TuD1, Technical Digest, San Jose, CA, pp. 20-21		02/1998
Z	Lee et al., "Bidirectional transmission of 40 Gbit/s WDM signal over 100km dispersion shifted fibre," Electronics Letters, Vol. 34, No. 3, pp. 294-295		02/05/1998
AA	Okuno et al., "Generation of Ultra-Broad-Band Supercontinuum by Dispersion-Flattened and Decreasing Fiber," IEEE Photonics Technology Letters, Vol. 10, No. 1, pp. 72-74		01/1998
BB	Masuda et al., "Ultrawide 75-nm 3-dB Gain-Band Optical Amplification with Erbium-Doped Fluoride Fiber Amplifiers and Distributed Raman Amplifiers," IEEE Photonics Technology Letters, Vol. 10, No. 4, pp. 516-518		04/1998
CC	Emori et al., "Less than 4.7 dB Noise Figure Broadband In-line EDFA with A Raman Amplified-1300 ps/nm DCF Pumped by Multi-channel WDM Laser Diodes," OSA Conference, paper PD3-1-5, Vail, CO		07/1998
DD	Rotwitt et al., "Distributed Raman Amplifiers for Long Haul Transmission systems," LEOS, pp. 251-252		12/1998
EE	Grubb et al., "Detailed analysis of Raman amplifiers for long-haul transmission," OFC Technical Digest, pp. 30-31		1998
FF	Kawai et al., "Ultrawide, 75-nm 3-dB gain-band optical amplifier utilizing erium-doped fluoride fiber and Raman fiber," OFC Technical Digest, pp. 32-34		1998

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EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.	

U.S. PATENT AND TRADEMARK OFFICE

PTO-1449

Information Disclosure Citation
In an Application

JUL 12 2002

Application No.

09/719,591

Applicant(s)

Mohammed N. Islam et al.

Serial Number

09/204.0163

Group Art Unit

Filing Date

June 16, 1999

U.S. PATENT DOCUMENTS

	DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
A	4,616,898	10/14/1986	Hicks, Jr.	350	96.15	09/28/1983
B	4,699,452	10/13/1987	Mollenauer et al.	350	96.16	10/28/1985
C	4,932,739	06/12/1990	Islam	350	96.15	09/25/1989
D	4,995,690	02/26/1991	Islam	350	96.15	04/24/1989
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F	5,078,464	01/07/1992	Islam	385	122	11/07/1990
G	5,101,456	03/31/1992	Islam	385	27	11/07/1990
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I	5,224,194	06/29/1993	Islam	385	122	04/02/1991
J	5,369,519	11/29/1994	Islam	359	173	02/05/1993
K	5,485,536	01/16/1996	Islam	385	31	10/13/1994
L	5,559,920	09/24/1996	Chraplyvy et al.	385	123	03/01/1995
M	5,629,795	05/13/1997	Suzuki et al.	359	337	08/31/1995
N	5,664,036	09/02/1997	Islam	385	31	10/12/1995
O	5,778,014	07/07/1998	Islam	372	6	12/23/1996

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	DOCUMENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION
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R	98/42088 A1	24.09.1998	WO	H04B	10/17	X
S	0 903 877 A2	24.03.1999	EP	H04B	10/18	X
T	99/66607 A2	23.12.1999	WO	H01S		X
U	00/49721 A2	24.08.2000	WO	H04B		X
V	1 054 489 A2	22.11.2000	EP	H01S	3/067	X

DOCUMENT (Including Author, Title, Source, and Pertinent Pages)

DATE

W	Hansen et al.; "Loss compensation in dispersion compensating fiber modules by Raman amplification," Optical Fiber Conference OFC'98, paper TuD1, Technical Digest, San Jose, CA, pp. 20-21	02/1998
X	Lee et al., "Bidirectional transmission of 40 Gbit/s WDM signal over 100km dispersion shifted fibre," Electronics Letters, Vol. 34, No. 3, pp. 294-295	02/05/1998
Y	Okuno et al., "Generation of Ultra-Broad-Band Supercontinuum by Dispersion-Flattened and Decreasing Fiber," IEEE Photonics Technology Letters, Vol. 10, No. 1, pp. 72-74	01/1998
Z	Rotwitt et al., "Distributed Raman Amplifiers for Long Haul Transmission systems," LEOS, pp. 251-252	12/1998
AA	Grubb et al., "Detailed analysis of Raman amplifiers for long-haul transmission," OFC Technical Digest, pp. 30-31	1998
BB	Kawai et al., "Ultrawide, 75-nm 3-dB gain-band optical amplifier utilizing erbium-doped fluoride fiber and Raman fiber," OFC Technical Digest, pp. 32-34	1998
CC	Emori et al., "Less than 4.7 dB Noise Figure Broadband In-line EDFA with A Raman Amplified-1300 ps/nm DCF Pumped by Multi-channel WDM Laser Diodes," OSA Conference, paper PD3-1-5, Vail, CO	07/1998
DD	Becker et al., "Erbium Doped Fiber Amplifiers Fundamentals and Technology," Academic Press, pp. 55-60	1999
EE	Yun et al., "Dynamic Erbium-Doped Fiber Amplifier Based on Active Gain Flattening with Fiber Acoustooptic Tunable Filters," IEEE Photonics Technology Letters, Vol. 11, No. 10, pp. 1229-1231	10/1999
FF	Nissov et al., "Rayleigh crosstalk in long cascades of distributed unsaturated Raman amplifiers," Electronics Letters, Vol. 35, No. 12, pp. 997-998	06/10/1999
GG	Mikkelsen et al., "160 Gb/s TDM Transmission Systems," ECOC, 4 pages	2000

EXAMINER

DATE CONSIDERED

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U.S. PATENT AND TRADEMARK OFFICE

PTO-1449		Application No. 09/719,591		Applicant(s) Mohammed N. Islam et al.	
Information Disclosure Citation In an Application		Docket Number 069204.0163		Group Art Unit	
JUL 12 2002		Filing Date June 16, 1999			
U.S. PATENT DOCUMENTS					
	DOCUMENT NO.	NAME	CLASS	SUBCLASS	FILING DATE
A	5,790,300	Zediker et al.	359	334	10/15/1996
B	5,796,909	Islam	385	147	02/14/1996
C	5,815,518	Reed et al.	372	6	06/06/1997
D	5,905,838	Judy et al.	385	123	02/18/1998
E	5,959,750	Eskildsen et al.	359	134	06/06/1996
F	5,978,130	Fee et al.	359	341	09/16/1997
G	6,008,933	Grubb et al.	385	341	08/19/1997
H	6,043,927	Islam	359	332	01/16/1998
I	6,052,393	Islam	372	6	07/07/1998
J	6,081,366	Kidorf et al.	359	341	08/28/1997
K	6,088,152	Berger et al.	359	334	03/08/1999
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M	6,151,160	Ma et al.	359	341	10/05/1998
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	DOCUMENT NO.	DATE	COUNTRY	CLASS	SUBCLASS
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R					
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S	Nielsen et al., "3.28 Tb/s (82x40 Gb/s) transmission over 3 x 100 km nonzero-dispersion fiber using dual C- and L-band hybrid Raman/Erbium-doped inline amplifiers," OFCC 2000, pp. 1229-1231				DATE 03/7-10/2000
T	Pending Patent Application; USSN 09/811,067, entitled "Method and System for Reducing Degradation of Optical Signal to Noise Ratio"				Filed 03/16/2001
U	Pending Patent Application; USSN 09/811,103; entitled "System and Method for Wide Band Raman Amplification"				Filed 03/16/2001
V	Pending Patent Application; USSN 09/916,454; entitled "System and Method for Controlling Noise Figure"				Filed 07/27/2001
W	Pending Provisional Patent Application; USSN 60/310,147; entitled "Combined Laser Diode Raman Pumps; Active Gain Equalizers; Bi-Directional Raman Amplifiers"				Filed 05/00/2002
X	Pending Patent Application; USSN 10/100,588; entitled "Electro-Absorption Based Modulation"				Filed 03/15/2002
Y	Pending Patent Application, USSN 09/768,367, entitled "All Band Amplifier"				Filed 01/22/2001
Z	Pending Patent Application; USSN 09/766,489; entitled "Nonlinear Polarization Amplifiers in Nonzero Dispersion Shifted Fiber"				Filed 01/19/2001
AA	Pending Patent Application; USSN 09/800,085; entitled "Dispersion Compensating Nonlinear Polarization Amplifier"				Filed 03/05/2001
BB	Pending Patent Application; USSN 09/760,201; entitled "Low-Noise Distributed Raman Amplifier Using Bi-Directional Pumping Using Multiple Raman Orders"				Filed 01/12/2001
CC	Pending Patent Application; USSN 09/765,972; entitled "S+ Band Nonlinear Polarization Amplifiers"				Filed 01/19/2001
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	DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
A	6,191,877 B1	02/20/2001	Chraplyvy et al.	359	124	07/15/1996
B	6,236,496 B1	05/22/2001	Yamada et al.	359	341	12/10/1997
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	DOCUMENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION
L						
M						

DOCUMENT (Including Author, Title, Source, and Pertinent Pages)

DATE

N	Pending Patent Application; USSN 10/003,199; entitled "Broadband Amplifier and Communication System"	Filed 10/30/2001
O	Pending Patent Application; USSN 10/007,643; entitled "Multi-Stage Optical Amplifier and Broadband Communication System"	Filed 10/30/2001
P	Pending Patent Application; USSN 10/014,839; entitled "Multi-Stage Optical Amplifier and Broadband Communication System"	Filed 12/10/2001
Q	Pending Patent Application; USSN 09/990,142; entitled "Broadband Amplifier and Communication System"	Filed 11/20/2001
R	Pending Patent Application; USSN 10/100,591; entitled "System and Method for Managing System Margin"	Filed 03/15/2002
S	Pending Patent Application; USSN 10/100,587; entitled "Fiber Optic Transmission System with Low Cost Transmitter Compensation"	Filed 03/15/2002
T	Pending Patent Application; USSN 10/116,487; entitled "Fiber Optic Transmission System for a Metropolitan Area Network"	Filed 04/03/2002
U	Pending Patent Application; USSN 10/100,589; entitled "System and Method for Dispersion Compensation in an Optical Communication System"	Filed 03/15/2002
V	Pending Patent Application; USSN 10/100,700; entitled "Rack System for an End Terminal in an Optical Communication Network"	Filed 03/15/2002

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